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(54) Title: HEAT PASTEURIZED LIQUIDS CONTAINING GLUCOSAMINE

(57) Abstract: The disclosure provides methods of making heat-pasteurized liquids, such as beverages, that contain glucosamine, wherein glucosamine is present in the beverage during the pasteurization process. The disclosure also provides liquids, such as beverages, made by these methods, as well as methods of using the glucosamine supplemented liquids, for example to treat osteoarthritis.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/34844

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A61K 47/00, 31/70  
 US CL : 424/439, 514/42

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 424/439, 514/42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 CAS ONLINE MEDLINE, search terms: glucosamine, beverage, drink, juice, pasteurization, levulinic acid, melanoidins

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,432,929 B1 (STONE) 13 August 2002, abstract, columns 5-8, the examples and the claims.	1-7
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Y	JP 2001-000158 A (YOKOO et al.) 09 January 2001 (09.01.2001), see the abstract, the claims.	8-16
Y	US 5,520,933 A (YOSHIDA et al) 28 May 1996 (28.05.1996) column 3, lines 1-7.	1-16
Y	JP 53-020443 A (ASAMA) 24 February 1978 (24.02.1978) the abstract.	12-15
		12-15

Further documents are listed in the continuation of Box C.

See patent family annex.

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- "&" document member of the same patent family

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